ISSN: 3049-2521 (O)

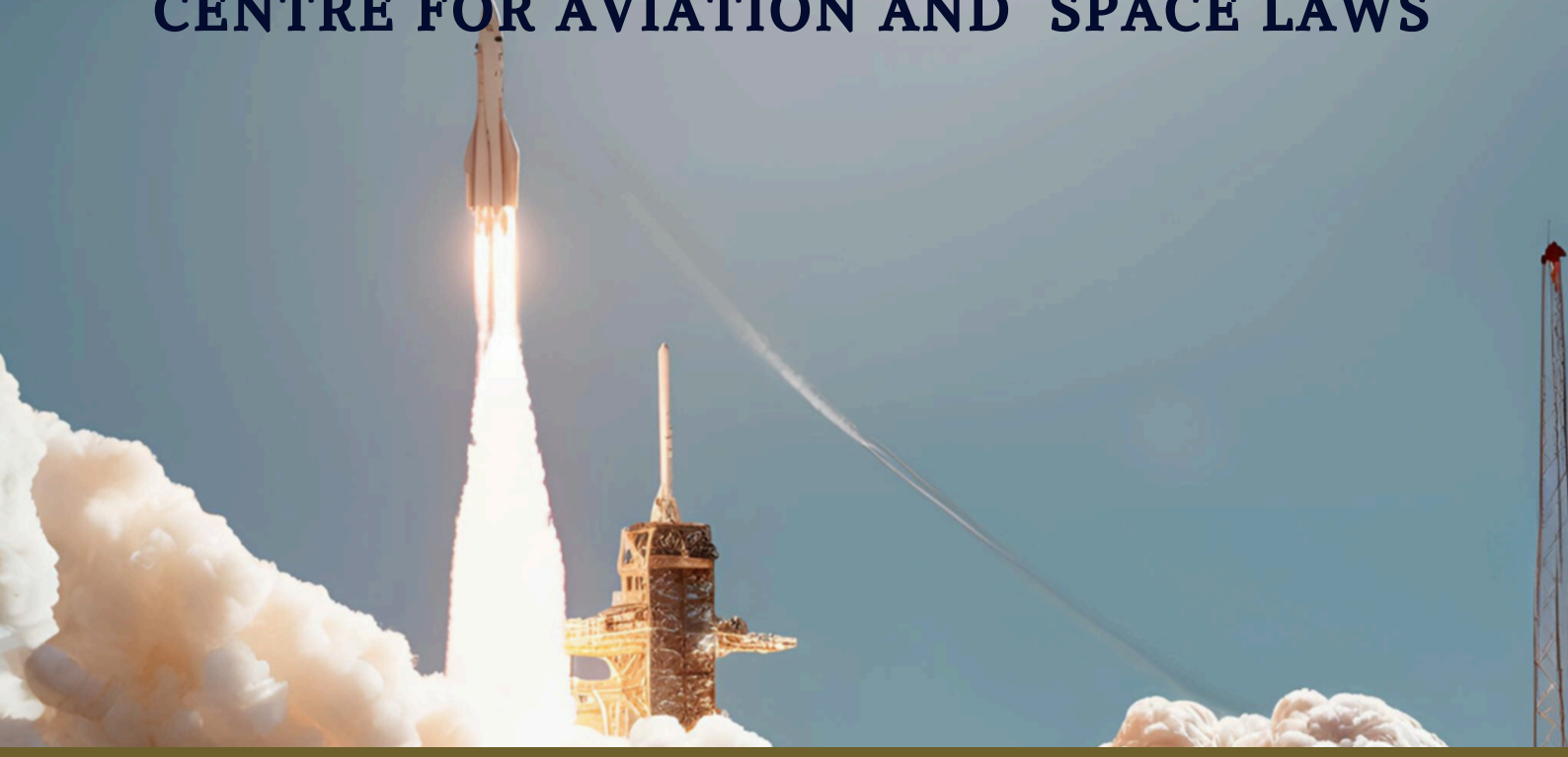
Volume 4 Issue II

2024

LEX AD COELUM

A Flagship Journal of

CENTRE FOR AVIATION AND SPACE LAWS



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EQUITY AND THE CHM PRINCIPLE IN THE MOON AGREEMENT: A TWAIL PERSPECTIVE

Aaditya Vikram Sharma[*]

Abstract

This article critically examines the Moon Agreement through the lens of Third World Approaches to International Law (TWAIL), highlighting the often-overlooked contributions of developing countries in advocating for the "Common Heritage of Mankind" (CHM) principle. While the Moon Agreement aims to prevent the monopolisation of celestial resources by technologically advanced nations, existing literature frequently marginalises the active role played by the Third World nations in its formulation. By revisiting the negotiation history from 1971 to 1979, the study demonstrates how countries like India, Egypt, and Chile employed sophisticated legal strategies to embed equity and distributive justice into international space law. The author argues that these nations were instrumental in challenging the dominance of powerful states and promoting a more inclusive legal framework for outer space activities. Employing a TWAIL perspective allows for a critical reassessment of the Moon Agreement, emphasising the need to acknowledge and integrate the role of the Global South in the development of international legal norms. The findings suggest that recognising the contributions of developing countries is essential for understanding the evolution of international space law and for addressing historical inequalities perpetuated by traditional legal narratives. This study fills a significant gap in the literature by foregrounding the sophisticated legal interventions of the Third World nations, thereby advocating for a more equitable and just approach to space governance that benefits all humanity, not just the technologically advanced.

Keywords: Common Heritage of Mankind – Equity – Global South – Moon Agreement – Space resources – TWAIL

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Introduction

The development of international space law has historically aimed to ensure that outer space exploration remains peaceful, cooperative, and beneficial for all humanity. The foundational Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space 1967 (Outer Space Treaty) established key principles, such as the prohibition of national sovereignty over celestial bodies and the obligation to conduct space activities for the benefit of all countries. The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies 1979 (Moon Agreement) built upon these principles by designating the Moon and other celestial bodies as the Common Heritage of Mankind (CHM), intended to prevent monopolisation of space resources by technologically advanced nations.

TWAIL offers a critical approach to international law, challenging its role in reinforcing historical inequities and power imbalances. It critiques how international legal norms often reflect the interests of powerful states, sidelining marginalised nations. In the context of space law, TWAIL advocates for legal frameworks that rectify disparities in access to space resources and technology. Applying this perspective to the Moon Agreement reveals how the CHM principle, championed by developing countries, represents a legal and political effort to transform space into a domain that benefits all humanity, not just those with advanced space capabilities.

Literature Review: Gaps in Space Law Scholarship

Scholarly discussions on the Moon Agreement and CHM often focus on the treaty's legal status and the positions of major spacefaring nations, such as the United States and the Soviet Union. However, such an analysis tends to marginalise the views and contributions of developing countries, which have historically advocated for equitable space governance. The limited recognition of Third World perspectives perpetuates a narrow understanding of the Agreement and its implications for global equity. Hence, there is a need to understand the significance of developing countries' efforts to institutionalise CHM as a means to promote fairness in space law.

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Key TWAIL scholarship, such as Antony Anghie's Imperialism, Sovereignty and the Making of International Law and B.S. Chimni's Third World Approaches to International Law: A Manifesto, critiques international law's perpetuation of colonial legacies and underscores the need to recognise the agency of the Global South in shaping legal norms. Sundhya Pahuja's Decolonising International Law further illustrates how international legal frameworks often sideline the contributions of developing nations, supporting the view that existing narratives about the Moon Agreement fail to acknowledge their sophisticated legal strategies adequately.

Although comprehensive texts like Routledge Handbook of Space Law by Ram Jakhu and Paul Dempsey and Space Law: A Treatise by Francis Lyall and Paul B. Larsen cover space law's history, they provide limited insight into the strategic roles played by the Third World countries. Articles such as David Tan's Towards a New Regime for the Protection of Outer Space as the 'Province of All Mankind' and Usha Natarajan's The Global Commons: Deep Sea, Outer Space and Beyond mainly discuss the CHM principle's legal implications rather than delving into the negotiation history that reflects the active participation of developing nations. While Fabio Tronchetti's The Exploitation of Natural Resources of the Moon and Other Celestial Bodies and Bin Cheng's Introduction to Space Law provide helpful background, they illustrate the tendency to focus on legal outcomes over the nuanced contributions of the Global South. Further, Lotta Viikari's The Environmental Element in Space Law, Michael Listner's analysis in "The Moon Treaty: Failed International Law or Waiting in the Shadows?" and Tanja Masson-Zwaan and Mahulena Hofmann's Introduction to Space Law provide insights into the legal background and challenges of space law. However, they do not deeply explore the strategic roles of Third World countries.

A literature that depicts the role of the Global South is Nandasiri Jasentuliyana's International Space Law and the United Nations, which offers an excellent insider perspective on space law negotiations, providing some context for the Global South's involvement, albeit without emphasizing their role in shaping legal norms.

Sandeepa Bhat has also contributed significantly to discussions on space law, mainly focusing on the "Common Heritage of Mankind" (CHM) principle and the equitable sharing of benefits from space activities. In his article, The Concept of

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Common Heritage of Mankind in the Governance of the Moon—An Insight into Article 11 of the Moon Agreement, Bhat examines the CHM concept within space law and emphasises the role played by developing countries in advocating for its inclusion in space treaties.[1] He critiques the existing legal frameworks for their shortcomings in ensuring true equity in space governance, thereby underscoring how the contributions and perspectives of the Global South are often marginalised in the broader discourse. Bhat's analysis aligns with the argument that the historiography of space law, including the Moon Agreement, frequently fails to recognise the active participation and strategic legal interventions of Third World nations. His work reinforces the need for a more inclusive and critical analysis that highlights the agency of developing countries in shaping international space law, providing further support for a TWAIL perspective on the topic.

Together, these sources indicate a gap in the literature where the contributions of the Third World nations are underrepresented, justifying the need for a more critical analysis through a TWAIL lens.

Revisiting the Negotiation History: A Nuanced Understanding of Equity

As seen above, the historiography of the Moon Agreement negotiations often reduces the role of Third World countries to that of passive recipients of legal norms dictated by more powerful states. Such a characterisation fails to appreciate the sophisticated legal strategies employed by these nations in advocating for CHM. For instance, the Indian position went beyond rhetorical advocacy; it articulated a legal principle that sought to prevent the emergence of new forms of imperialism in space, where resource-rich celestial bodies could be claimed and exploited solely by those with advanced space capabilities. Egypt, along with other countries, echoed these sentiments, emphasising the need for an international regime to oversee resource exploitation and ensure equitable benefits-sharing.

From 1971 to 1979, the negotiations leading to the Moon Agreement saw significant contributions from Third World countries, particularly in advocating for the CHM principle aimed at preventing the monopolisation of celestial resources by technologically advanced nations. These negotiations have been broadly arranged in the Table below.

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In the early 1970s, countries like India and Egypt took the lead, emphasising the need for a legal framework that ensured equitable resource sharing and transparency in space activities. The United States, however, initially resisted the inclusion of CHM in a binding form, expressing concerns that the principle could limit commercial interests and national sovereignty. The Soviet Union adopted a more cautious approach, supporting multilateral discussions without explicitly committing to CHM.

As drafting progressed, the advocacy by the Third World countries for a strong CHM framework persisted during 1974 and 1975, with active proposals for benefit-sharing mechanisms, while the United States and Western European nations favoured a softer, non-binding interpretation to avoid rigid international regulations. During the years 1976 and 1977, developing nations such as Chile, Egypt, India, Mexico and Sierra Leone were of the opinion that the natural resources on the moon and other celestial bodies should be CHM. In 1978, a compromise was reached, with Third World countries securing language in the draft that recognised CHM and called for the development of an international regime to oversee resource exploitation. To be sure, the Working Paper was submitted by Austria, which, since the beginning, has been more aligned with the views of the Third World. However, this breakthrough reflected the persistent and continuous efforts of states like India, Chile, and Egypt to advocate equity in space governance.

Nevertheless, the United States remained sceptical of the agreement, citing concerns about CHM ambiguities and future obligations. By the time the Moon Agreement was adopted in December 1979, the positions of key spacefaring nations had solidified, with the United States and the Soviet Union opting not to ratify the treaty due to reservations about international control over space resources. While the limited ratification dampened the Agreement's immediate impact, Third World countries viewed it as a symbolic achievement in promoting equitable space law. The negotiations demonstrated their sophisticated legal strategies in pushing for a more just legal framework, challenging the dominant powers' reluctance to embrace a comprehensive CHM-based approach.

The following Table reflects the views of different States (in summary) during the negotiation for the Moon Agreement:

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TABLE			
Year	**Developing Countries' Perspective(s)**	**United States' Perspective(s)**	**Soviet Union's Perspective(s)**
1971-1973	Advocated for the "Common Heritage of Mankind" (CHM) principle, emphasising equitable resource sharing and preventing monopolisation. India and Egypt were prominent voices.	Initially resisted legally binding CHM, citing concerns about limitations on commercial interests and national sovereignty.	Supported multilateral discussions but was cautious about committing to CHM and prioritising strategic interests.
1974-1975	Continued pushing for a strong CHM framework, with calls for transparency and a regulatory regime for resource exploitation. India and Chile took active roles.	Agreed to discuss CHM but favoured a non-binding interpretation to avoid restrictive regulations that could impact private enterprise.	Participated in discussions, showing a pragmatic stance while safeguarding space program independence.
1976-1977	Actively shaped	Opposed binding	Focused on

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	the draft legal text, advocating for technological transfers and equitable participation in space activities. Egypt and Argentina were key proponents.	provisions that could deter investment in space technologies. Highlighted ambiguities in CHM that could affect commercial interests.	protecting its own strategic interests while remaining relatively less vocal about specific provisions.
1978	Secured a compromised draft that recognised CHM and called for an international regime to oversee resource exploitation. Played a pivotal role in finalizing language supportive of CHM.	Expressed scepticism over the CHM compromise, and was concerned about potential future obligations and ambiguous language.	Adopted a wait-and-watch approach, accepting the draft with reservations and prioritising bilateral space partnerships.
1979 (Adoption)	Achieved the formal adoption of the Moon Agreement with CHM as a central principle despite the lack of ratification from	Declined to ratify the Moon Agreement due to concerns about CHM ambiguities and potential restrictions on space activities.	Refrained from ratifying the Agreement, opting to pursue space activities outside the CHM framework, viewing it as overly restrictive.

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	key spacefaring countries. Viewed the treaty as a symbolic victory for equitable space law.		

The negotiating history of the 1979 Moon Agreement reveals a concerted effort by Third World countries to assert their influence over the evolving landscape of international space law. Contrary to narratives that position these nations as peripheral actors, developing countries played a central role in advocating for the CHM principle, aiming to establish a legal framework that prioritises equity and collective stewardship of celestial resources. From the outset, nations such as India, Egypt, and Chile were vocal in their push to prevent the monopolisation of space resources by technologically advanced states, seeking to ensure that the benefits derived from lunar and other celestial activities would be distributed equitably.

The CHM principle, as championed by these countries, was not an abstract ideal but a strategic legal intervention aimed at embedding distributive justice within the regime of space governance. Drawing parallels with the governance mechanisms established for the deep seabed under the United Nations Convention on the Law of the Sea, developing nations argued for an international framework that would regulate resource exploitation, enforce transparency, and establish mechanisms for benefit-sharing. This vision directly challenged existing disparities in space capabilities and access, with the objective of securing a meaningful role for all states in space activities, regardless of their technological advancement.

Throughout the protracted negotiations from 1971 to 1979, the cohesive stance adopted by Third World countries demonstrated a sophisticated legal strategy. They consistently advocated for the recognition of CHM while also pushing back contrary efforts by major spacefaring nations to dilute the principle's legal implications. Despite encountering resistance, especially from the United States and the Soviet Union, who expressed concerns about the impact on national sovereignty and commercial space interests, the persistence of these developing

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nations shaped the final provisions of the Moon Agreement, leading to the formal acknowledgement of the CHM principle.

A TWAIL view

The negotiating history of the Moon Agreement reflects a TWAIL perspective by highlighting the active role and strategic efforts of developing countries in shaping the Moon Agreement, which aligns with TWAIL's focus on challenging dominant narratives and advocating for more equitable international legal frameworks. This view is based on the following findings:

Challenging the Status Quo: The TWAIL perspective emphasises resistance to the historical dominance of powerful states in shaping international law. The research shows how developing countries, led by nations like India, Egypt, and Chile, consistently advocated for the CHM principle, aiming to prevent the monopolisation of space resources by technologically advanced nations. This advocacy challenges the status quo, where the interests of powerful states often dictate the terms of international legal norms.

Promoting Equity and Fairness: TWAIL focuses on embedding principles of distributive justice and equity within international law. The research demonstrates how developing countries pushed for legal frameworks that would ensure equitable sharing of space resources, transparent space activities, and inclusive participation. Their calls for a strong CHM framework and an international regulatory regime to oversee resource exploitation align with TWAIL's goal of redistributing benefits and addressing global inequalities.

Foregrounding the Agency of the Global South: TWAIL seeks to recognise and amplify the agency of the Global South in shaping international law. The research highlights how Third World countries were not merely passive recipients of legal norms but active shapers of the Moon Agreement. Their efforts to influence the treaty's provisions, advocate for technology transfers, and insistence on benefit-sharing mechanisms show a proactive and sophisticated legal strategy that counters the dominant narrative that often marginalises the role of developing nations.

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Resistance from Powerful States: The TWAIL critique also points out how powerful states resist efforts that may challenge their privileged positions within the international legal order. The research above reflects this by showing how the United States and the Soviet Union, the two major space powers, opposed binding CHM provisions and were reluctant to ratify the Moon Agreement. Their resistance illustrates the tension between the Global North's interests in maintaining freedom for commercial space activities and the Global South's push for an equitable legal regime.

Addressing Historical Inequalities: TWAIL emphasizes the need to address historical and structural inequalities in international law. The efforts of developing countries to embed CHM into the Moon Agreement aimed to redress the unequal distribution of space capabilities and prevent new forms of space imperialism. By advocating for rules that would make space resources a shared heritage rather than exclusive assets of a few, Third World countries sought to correct the imbalance in space governance, reflecting a TWAIL commitment to restructuring the international legal system.

Conclusion

This study challenges the dominant historiographical approach that tends to relegate the contributions of the Global South, often reducing them to passive recipients of international legal norms. By critically engaging with the negotiating history, it becomes evident that Third World countries were not only active participants but were instrumental in shaping the discourse around equitable space governance. Their advocacy for the CHM principle reflects a broader struggle for a more just and inclusive legal order, calling for a re-examination of existing accounts of space law development to better recognise the role of these nations in advancing a framework of fairness and shared benefits.

Notes & References:

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[1] Sandeepa Bhat B., 'The Concept of Common Heritage of Mankind in the Governance of the Moon—An Insight into Article 11 of the Moon Agreement', *Legal Opus*, Vol. 1, No. 1, 2007, pp. 92 – 107 at p. 95.

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PRIVATISATION AND THE LEGAL FUTURE OF SPACE MINING: 67TH COPUOS SESSION IN THE AGE OF ASTROFORGE

Nirbindu Banerjee[*]

Abstract

As the concept of commercial mining in space transitions into reality from theoretical discussions, the existing international legal framework is found inadequate. The Outer Space Treaty, being the Grund norm, provides several essential principles for space governance, which need to be adhered to to ensure orderly developments in space. Despite the strong reflection of the common rights regime in international space treaties, the failure to prohibit certain activities in explicit terms has resulted in varied interpretations of the provisions of space treaties. The permissibility of space mining by public or private entities and the claim of property rights over mined resources is one such domain of controversy. The last decade's developments in domestic laws and international arrangements, like the Artemis Accords, have exemplified the concerns relating to space mining. The recent exchanges from the 67th session of the Committee on Peaceful Uses of Outer Space, focusing on the increasing necessity of a cohesive international framework, attain significance in this regard. The perplexities of the United States domestic laws and the Artemis Accords need to be addressed before they slowly gather ideological traction in other countries to the detriment of our common interest. This article is an effort to accentuate the necessity of expunging the uncertainties surrounding current developments relating to space mining.

Keywords: AstroForge – COPUOS – Outer Space Treaty – Private Space Activity – Space Mining

Contextualisation

Although the utilisation of space resources was first suggested by Tsiolkovsky as early as 1903, until the last decade, space mining had been a futuristic endeavour to be imagined, and its legal complexities were simultaneously hypothetical at best. According to Zwart and Henderson, the primary driving force behind space

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exploration missions had previously been using resources in space settlements and recycling consumables and fuel for space mission longevity, mainly from state space agencies. Contemporary deliberations, like the 67th COPUOS Session (June 2024), have established the distinction recognised by the international community, where a noticeable shift in policy directives during dialogue exchanges is visible not only towards the use of space resources during exploratory missions but also integrating the possibility of commercial exploitation by private entities. The difference between *in-situ* utilisation of space resources and commercial extraction to be used back on earth, envisioned by private entities like AstroForge, might also co-relate to the difference between defining use and exploitation. It is unclear whether Article I of the Outer Space Treaty would consider such extraction within the ambits of 'use' of outer space, which it refers to, without specifically defining it. The recent international delegations, like the 67th COPUOS session, however, lean towards enabling such extraction, and a more flexible interpretation might be assumed from that context.

In his book,[1] G. S. Sachdeva had expressed that the space mining and extraction or exploitation of resources from outer space would most likely be a private initiation; recognising the pattern of state-based agencies leaving such missions as public funds would hardly be allocated to this kind of bold ventures, to say the least. The most recent example is AstroForge, a US-based private space mining company that has set forth the extraction and use of space resources as its *raison d'être*. In August 2024, it was reported that this private enterprise was planning its third space mission in 2025, the first private mission to land on another body outside of the Earth-Moon system. The planned mission, named "Vestri", would dock on a near-earth asteroid and extract material from it, as claimed by the company. This planned mission brings into focus Article II of the Outer Space Treaty as well as other provisions from international legal instruments that will be discussed further in this article.

Article II specifically prohibits appropriation of resources, yet it technically leaves the status of resource extraction unresolved. The non-appropriation principle does not explicitly forbid mining asteroids or any other celestial body on its own; rather, it speaks primarily about possessing space or having a sovereign claim over it. While some academics contend that the same principles apply to resource

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extraction, these views have been severely tested by the enactment of national laws pertaining to the extraction of space resources and giving rights over extracted resources to private companies. During the COPUOS session, the exchange indicated that a divide between an enabling and conservative interpretation of the terms is imminent. With the recognition of several emerging domestic legislation in these international institutional proceedings, there is a divergence of opinion related to commercial activities. The Outer Space Treaty's silence on this matter raises a divide in the academic discourse around the matter and pushes such space missions with massive investments to a realm of legal uncertainty.

Technological inventions and a growing interest in acquiring a first-comer advantage in the commercialisation of space have led to space mining being a prominent option to venture into. Despite not being the first private venture into the extraction of natural resources from outer space, AstroForge has already gathered investments of approximately 55 million US dollars. Estimates indicate that such an interest is anticipated because the high-productivity asteroid mining profit assessment is in trillions. Although being an early adapter is considerably challenging, and chances of profit-making is low, the space mining has gradually gained momentum to be a more serious legal issue.

Legal Foundations of Space Mining and 67th COPUOS Session Deliberations

Without trying to repeat the existing discourse on space mining and international law, the compatibility of 'commercial exploitation', especially by private companies or individuals, with existing international instruments like the Outer Space Treaty is a matter to be tested. Outside Article I's general terms of common rights, Article II of the Outer Space Treaty supports space as a common resource and explicitly prohibits national appropriation. Some argue that while space itself is part of the province of all mankind and used for humankind's benefit, the resources gathered through activities like mining in space are acceptable to be extracted and appropriated, even through private entities. This interpretation stems from a textual gap of not having a direct mention of private appropriation.

Nonetheless, an interpretation could be made under the second sentence of Article VI of the Outer Space Treaty, where it has been mentioned that "authorisation and

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continuing supervision by the appropriate State party" is applicable when it comes to the activities of non-governmental entities in outer space.[2] Thus, private entities can be effectively linked to Article II's anti-appropriation mandate, as they must ensure that their activities do not flout the fundamental principle relating to non-appropriation. As private companies venture into non-sovereign areas like asteroids, the problem of untangling regulatory complexities becomes multi-fold. The expansive advancement of privatisation carries the risk of making Article VI antiquated.

The discussions during the COPUOS session in June 2024 viably emphasised these concerns and often followed the necessity of revising interpretations and guidelines for the seamless integration of private commercial space ventures and resource utilisation possibilities. A number of delegations emphasised the significance of creating additional by-laws to regulate space mining operations, with due respect to the commercial aspects of contemporary space exploration, while adhering to the values of the Outer Space Treaty. It was viewed that national space activities by non-governmental organisations, as mentioned in Article VI, might not have been considered as commercially beneficial ventures of this humongous stature. Hence, Article VI will most certainly need to be supplemented with a set of by-laws if beneficial space mining comes to pass.

The venture of AstroForge into asteroid mining exemplifies this grey area of non-specificity, where private entities attempt to utilise space resources for profit while working within an outdated legal framework for private-state interactions. AstroForge is supposed to be the state's responsibility as a US-based private entity. However, the presence of the Commercial Space Launch Competitiveness Act of 2015, a domestic legislation of the United States, further complicates the issue. The United States has always argued that commercial exploitation of celestial resources is not inconsistent with the standing principles of international law, and the Moon Agreement cannot be depended upon as customary international law.[3] More states, such as the UAE, Luxembourg and Japan, have followed suit and enacted similar laws after initial indecisiveness. The Artemis Accords of 2020 also introduced provisions extending the idea of resource extraction at the global level via international cooperation.

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It is significant to note that the Outer Space Treaty confers the freedom of 'use', however, not 'exploitation'. Understanding the distinction between 'use' and 'exploitation' is very significant. The United States brought back rock samples from the moon through the Luna and Apollo missions. A substantial amount of rock samples was collected, which helped to triangulate the chronological origin of the moon and other scientific questions. It was not objected to due to the lack of means from other countries and geopolitical narratives. More significantly, the scientific nature of such exploration made them to be accepted as 'use'. In contrast, private extraction or mining by a state authority for domestic benefits might be considered 'exploitation' since its purpose is commercial, and such activities have the effect of limiting space access for others. AstroForge's planned mining of valuable metals from asteroids exemplifies a case where the line between these concepts blurs, demanding a re-evaluation of how international law governs such activities.

Currently, no visible interpretation can be considered indisputably superior to the other regarding international laws on space mining. With vague correspondence to space mining and extraction, these international instruments have now parallelly growing domestic laws that permit space resource activities. The COPUOS discussion also points out the lack of uniformity and contradiction between domestic laws and international norms. This can take further logical foundation from the recent Final Rule document by the Federal Aviation Administration (FAA) in the United States. On 19 September 2024, the FAA, in its Final Rule document, admitted that it does not have any statutory authority for commercial regulation of space resources, and Congress has not set up any such authority for 'commercial recovery' of space resources. This goes against the norms mentioned in Article VI of the Outer Space Treaty, wherein the United States must properly authorise and supervise non-government activities.

The 67th COPUOS Session Report

The 67thsession of COPOUS evidenced the exchange of ideas between delegations revolved around two reports. The Draft Report of the Chair and Vice-Chair and the Report on the International Conference on Space Resources were presented at this exchange and lauded for their progress towards developing a

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framework. However, these exchanges raise critical responses and valid questions requiring in-depth legal analysis, especially in private ventures like AstroForge. Operations and mission plans of these private ventures exemplify the regulatory need for activities to extract and utilise outer space resources.

The report on the international conference clearly states that delegates present in the panel have emphasised the importance of space activities benefiting all of humanity and adhering to the established principles of the Outer Space Treaty. There, the panellists talked about having a legal framework for utilising space resources, which would be 'enabling' and 'equitable' in nature. This priority towards equity is said to be consistent with the long-standing tenets of the Outer Space Treaty, namely Article II's prohibition on national appropriation and Article I's declaration of non-discriminatory access to space. This, nevertheless, warrants a closer scrutiny. The COPUOS general exchange also describes equal access to resources on multiple instances, which invariably collides with the idea of enabling commercial exploitation by private entities, even with strict regulations.

The lack of specificity resulting from diplomatic and regulatory obstacles towards addressing private ventures trickles down and may initiate dispersed regulatory procedures. In this process, some states allow resource extraction through domestic legislation while some others find it difficult to accept it as permissible under the Outer Space Treaty, which directly conflicts with the idea of equity mentioned in the report.

The legal subcommittee and panellists discussed the procedure implemented by the United Nations Convention on the Law of the Sea (UNCLOS) while discussing about space resources. A flurry of probable important proposals were discussed here as parts of a regulatory framework. One of them is having a legal database for extracted resources from space, which is reflective of a similar genus of laws already existing under the law of the sea. This makes it mandatory for private entities like AstroForge to catalogue and report the volume and nature of their extracted materials. The International Seabed Authority also has the provision to take appropriate measures to protect the marine environment under Article 145 of UNCLOS, which is also argued to be emulated for protecting damage to the space environment. While the concept of equal access would benefit greatly from these proposals, implementation of such a structure would depend on the binding

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nature of the rules to be introduced. The current diplomatic divergence of opinion regarding the extraction of space resources would be counterintuitive to the possibility of such a structure emerging soon.

The conference report also talks about exchanges being had on existing discourses, such as, political and legal fairness of the common heritage of mankind (CHM). The importance of public-private sector interaction is also mentioned as a key takeaway of the conference. However, the report does not discuss the non-governmental organisation and their impetus for space resource extraction ventures in any specific manner. An essential analogy is implicitly provided in the exchanges when parallels are drawn to the UNCLOS, where a specific legal structure has been developed under the regulation of the International Seabed Authority by establishing a licensing scheme. The discussions indicate that a similar framework might be envisioned in the near future for outer space resources, in which private ventures might also be regulated internationally. However, the COPUOS exchange does not out-rightly suggest the formulation of such bodies but only leaves the pathway open for the international community to discuss further.

The idea of a multilateral legal framework for resource extraction, exploitation, and utilisation, which is structured under the guidance of the Hague Working Group on International Space Resources Governance and Legal Sub-committee, has been put forward. Emphasis was put on the fact that any such legal framework, if taken forward, has to adhere to the existing principles of the Outer Space Treaty. It is also mentioned that no commercial activity should cause harm or unduly affect scientific activities. Hence, a preference towards scientific missions with a stronger focus on exploration for knowledge and information as well as to further advance science and technology is seen in the discussions. Although scientific activities by non-governmental organisations are also definitely prevalent, the preference for scientific activities would seemingly mean state activities would have preference over the extraction ventures of private entities, at least in the present scenario. Delegations also expressed that space resource activities must be regulated under international law, and the working group's regulations must be viably binding to ensure fidelity and access to resources for developing countries.

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The focus on binding values in this part of the exchange is significant as a non-binding partial framework has already been seen beforehand in the form of a non-binding 'Building Blocks' document (2019) of the Hague Working Group. The Building Blocks provides a standard set of ideologies like international co-operation and multi-stakeholder dialogue. The discussions in the COPUOS session are a step forward in norm creation, which could lead to a pragmatic solution. Adaptive governance is rightly mentioned in the context of private space activities for the legislative and administrative regulations. While understanding the significance of private sector participation, the UN General Assembly has also adopted "Pact for the Future", which mentions the integration of private sector stakeholders and international organisations to converge on the policies for safe, peaceful and sustainable usage of space under Action 56.

Concluding Remarks

The utilisation, exploitation, and extraction of space resources are ambitious ventures, and they are further exacerbated by AstroForge's ambitious plans. However, the situation also exposes the inadequacy of the current international legal framework, which does not yet deal with the complexities of interaction between international law and private enterprises. The contradictions between municipal laws and international treaties and principles establish the necessity of a cohesive and adaptable legal regime to respond appropriately to the questions arising from possible commercial exploitation of space resources. Until such a structure comes into effect, companies like AstroForge will continue to exist in legal limbo, pushing the limits of what is acceptable under the current legal system.

The recent COPUOS session partially acknowledges the above-mentioned problems and discusses probable solutions. However, there is a serious possibility that private space mining ventures will outpace the illusive comprehensive international regulations. Moreover, the discussions remained as simple reiterations and not substantive advancements, especially in the wake of the existence of previous basic instruments like the Building Blocks. Although the deliberations focused on respecting the principles enshrined in the Outer Space Treaty while enabling commercial exploration of space, its practicability will be tested once regulations are in place and the categorical missions happen with regularity.

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A broad category of recommendations could merit consideration to ensure adaptability in future legal structures. First, binding international regulations modelled after the Building Blocks document could include stringent transparency mechanisms and licensing procedures, offering various benefits. It offers a chance to pre-regulate these missions, collect and disseminate data regarding such ventures, and deter possible bad-faith actors in a nascent stage. Secondly, the adaptive governance system discussed in the COPUOS Session could be implemented with a tangible objective and structure, maybe with an international governing body. Of course, the 'haste' argument against such reactionary enforcement could be made. Still, correction and rectification, depending on the context, are available as a part of the constant vigilance under adaptive governance to take care of any concern. Also, fostering innovations through strategic public-private partnerships is key for ensuring sustained space resource activities. We need to understand that commercial use and resource gathering from outer space is certainly an unavoidable future and may even be a welcome step with the proper administrative and juridical framework in place.

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EXPLORING THE POSSIBILITY OF AN INTERGENERATIONAL RIGHT TO RETURN TO EARTH

Dr. Anna Marie Brennan[*]

Abstract

If human civilisation realises its grand ambitions to establish extraterrestrial human settlements on Mars in the not-so-distant future, how will human rights apply and be enforced? Rather than States, it is thought that space companies such as SpaceX, Blue Origin and the Sierra Nevada Corporation will be the first to establish extraterrestrial settlements. Rapid technological developments over the last decade mean that these ambitions are no longer science fiction. This article considers the scope of the right to freedom of movement in outer space, especially the right to return to Earth. Due to the perilous nature of the journey from Earth to Mars and the harsh environment in which the first settlements will be established, this article considers whether there are any legitimate and, indeed, permissible circumstances where the right to return to Earth will be restricted. The final part of this article will explore the possibility that future descendants of the first wave of settlers to Mars will have an intergenerational right to return to Earth despite having been born on the Red Planet.

Keywords: Customary international law – Extraterrestrial settlement – Human rights – ICCPR - Own Country

Introduction

With Mars located approximately 140 million miles from Earth, NASA estimates the precise duration of the journey there and back to be approximately 21 months. In view of these arduous journey times, it is unlikely that many of the first wave of settlers to Mars will seek to return to Earth. Nevertheless, there is a possibility that a small proportion of these first settlers, as well as their future descendants, may wish to do so. Elon Musk has grand plans to colonise Mars with one million humans by 2050, but questions remain about how migration between Mars and Earth will be regulated and configured. There continues to be no guidance at the international level on this question despite rapid technological advancements making multi-planetary residency an increasing possibility.

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Seminal research by Ram Jakhu and Joseph Pelton asserts that the enforcement of human rights in outer space is critical for protecting it as a 'shared international commons' and 'province of all [hu]mankind.'[1] However, 'simply transposing Earth-based laws… to outer space [would be]… a lazy exercise failing to consider the multiple scientific differences that will necessarily carry legal implications.' Nevertheless, some scholars believe that Earth-based human rights systems can at least provide a starting point to consider the breadth and scope of human rights in outer space especially on extraterrestrial human settlements. An in-depth hypothesis of how and the extent to which the right to liberty of movement will be exercised in outer space, as well as a scholarly analysis of whether the first wave of settlers to extraterrestrial human settlements and their future descendants will retain a right to return to Earth, is largely absent in the literature. Some scholars may argue that as settlers' community and property interests, as well as their familial connections, fade on Earth, their right to return will dissipate. At the same time, it is conceivable that the first wave of settlers on Mars will retain some expectation that they may return despite the logistical, medical and technological challenges in doing so and may plan their lives accordingly. The more difficult question for scholars to answer is whether the future descendants of the first wave of settlers will also retain a right to return that is similar in breadth and scope to the right their parents and grandparents had.

The Scope of a Potential Right to Return to Earth

Article 1 of the Outer Space Treaty definitively proclaims that '[o]uter space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on the basis of equality and in accordance with international law.' While it can be suggested that the phrase 'free for exploration' in Article 1 encapsulates a right to liberty of movement, its precise scope and application in outer space have thus far not been widely delineated either at the international level or in scholarly literature. Article 12 of the International Covenant on Civil and Political Rights (ICCPR) affirms that all individuals legally present within the territorial boundaries of a State not only have a right to freedom of movement but also a right to return. While a reading of this provision, in tandem with Article 1 of the Outer Space Treaty, suggests that all individuals resident on Earth have a right to liberty of movement in outer space, it remains to be seen whether individuals who opt to move to extraterrestrial

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settlements will have a right to return to Earth if they wish to do so. Scholars such as Cockell have suggested that extraterrestrial settlements will be self-governing with their own distinct legal systems and human rights mechanisms.[2] Given the isolated location of these hypothetical extraterrestrial settlements, perhaps self-governance would be logical and preferred given the arduousness of Earth-based States endeavouring to govern and administer them. If somehow, Earth-based law does apply and is enforceable on extraterrestrial settlements; inhabitants would enjoy 'the right to remain, or the right to stay, or even the right to return, [which are all]… expressions of the freedom of movement.' However, the practicalities of exercising this freedom in outer space remain underexplored. Indeed, the high costs involved in spacefaring and establishing potential extraterrestrial settlements may lead States to impose limitations and even a moratorium on the exercise of this right.

The drafting and negotiation of the ICCPR showcases the possibility that States and space companies will adopt divergent approaches to freedom of movement on extraterrestrial settlements. For instance, several States have defined freedom of movement as 'an important right and one which was an essential part of the right to personal liberty,' while other States blatantly refused to recognise it as a fundamental guarantee.[3] In particular, the United States, which is a signatory party to the ICCPR, has disputed the treaty's extraterritorial application. It has also cited this reason for its withdrawal from negotiations for the adoption of the UN Draft Treaty on Business and Human Rights. With several corporations seeking to establish extraterrestrial settlements registered in the United States, a prevailing question is whether serious human rights violations on future extraterrestrial human settlements could occur in the conquest for profit maximisation. Before plans to develop extraterrestrial human settlements advance any further, an international collaborative mechanism needs to be instituted to consider the practicalities and realities of life in future extraterrestrial settlements. To what extent will risk assessment, mitigation and remediation processes exist on extraterrestrial settlements to decipher the impact of corporate activity on human rights is a moot question to be answered.

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The Evolution of Customary Law

The acquisition of nationality in spacefaring nations has long been predicated on the doctrines of *ius soli* and *ius sanguinis* and the birthplace of a person residing on a future extraterrestrial settlement may likely be an important factor for establishing entry/residency rights on Earth. Customary international law has also long embraced the right for a person to enter their own country and this has been espoused in several international treaties. Article 12(4) of the ICCPR states that '[n]o one shall be arbitrarily deprived of the right to enter [their]… own country.' Crucially, it has been noted that 'the right applies equally to citizens and permanent residents' and individuals can 'return from a journey abroad to what had in effect become their country.' As noted in the Summary Record of the 315th Meeting of the UN Commission on Human Rights, 'citizenship and nationality [are] not the final determinants' of a right to enter a State. Indeed, the decisive factor is whether the State was the individual's permanent residence. A definitive study of future space migration and its implications for the development of human societies and their cultures on extraterrestrial settlements has not yet been undertaken. With the drive to make extraterrestrial settlements viable and permanent, it is conceivable that restrictions will be placed on residents' right to return to Earth in the interests of safeguarding the long-term success of the settlement.

Article 12(4) of the ICCPR provides that the right to enter a State is an individual right and not a collective one, 'the significance of which lies in the fact that any agreement concluded enabling the return of some but not all… could be challenged as being in violation of this provision.'[4] As Hurst Hannum notes, interference with the right could possibly happen if a person is not granted entry in a manner that is 'incompatible with the objective of protection.'[5] In the context of extraterrestrial settlements, interference could potentially include not regularly maintaining and repairing spacecraft in a timely manner to facilitate individual's travel to Earth. A literal interpretation of the ICCPR suggests that the right to leave an extraterrestrial settlement and return cannot be subjected to restrictions 'except those provided by law.' This is emphasised by the *travaux préparatoires* which posit that 'while the right was not absolute, it should not be made subject to the same kind of restrictions as the other rights.' Similarly, the UN Human Rights Committee has proclaimed in paragraph 21 of General Comment No. 27 that 'there are few, if any circumstances in which deprivation of the right to enter one's

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own country could be reasonable.' While it remains to be seen what legitimate grounds could be proffered to refuse a person's entry to Earth after prolonged periods spent residing on extraterrestrial settlements, it can be posited that possible reasons would include public health and order grounds as well as national security concerns. There will likely be scenarios where a person's entry to Earth occurs unintentionally because of an accident, emergency or unintended landing. Even if the person lands in the ocean or in the territory of a State of which they are not a citizen, Article 3 of the Rescue Agreement clearly provides that 'Contracting Parties which are in a position to do so shall, if necessary, extend assistance in search and rescue operations for such personnel to assure their speedy rescue.' Arguably, an individual's nationality must not be taken into consideration by the States when determining whether they can rescue them.

One of the crucial questions facing future lawyers is whether descendants of the first generation of settlers of extraterrestrial settlements will be able to exercise a right to return to Earth under Article 12(4) of the ICCPR despite not having been born here. While research on the health and well-being impacts of a visit and stay on Earth for Mars-born people remains in its infancy, scientists posit that perhaps the health risks would outweigh the benefits of returning to Earth either temporarily or permanently. Medical concerns include that the heart muscles of individuals residing on Mars will pump blood more easily since there will be little to no gravity to exert the circulatory system. Returning to Earth would run the risk that the person's heart would not be able to pump blood against the force of gravity. Nevertheless, Article 12(4) provides that '[n]o one shall be arbitrarily deprived of the right to enter his own country.' So how should the phrase 'his own country' be interpreted, and does the inclusion of this phrase mean that individuals born in extraterrestrial settlements will not be able to exercise this right? These are all moot questions to be answered.

Proukaki, who has examined this issue in the context of forcible displacement during armed conflicts, argues that Article 12(4) 'is not intended to be restricted to those individuals who lived in the [S]tate of origin as opposed to individuals who never lived there.' If we are to apply Proukaki's reasoning to the descendants of the first generation of settlers on extraterrestrial settlements, it is possible to suggest that despite not having been born on Earth, they will not face restrictions

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in their exercise of this right. Paragraph 19 of General Comment 27 of the UN Human Rights Committee potentially supports this conclusion:

> [t]he right of a person to enter his or her own country recognises the special relations of a person to that country. The right has various facets. It implies the right to remain in one's own country. It includes not only the right to return after having left one's own country; it may also entitle a person to come to the country for the first time if he or she was born outside the country.

While it is likely that some States will contend that descendants of the first generation of settlers will not have a right to enter, it is important to note that Article 12(4) of the ICCPR does not contain any condition that the exercise of the right is subject to being a citizen of the State concerned. According to Proukaki, the crucial factor 'is the effectiveness of the links that an individual has with the said country.' Thus, an individual, despite having been born on an extraterrestrial settlement, will have a right to enter States on Earth that they have an effective link with. While it is unclear what factors will demonstrate this effective link, we can hypothesise that ancestry, as well as family/community bonds and property interests, are likely to be important factors.

If a person ordinarily residing on an extraterrestrial settlement has special ties to a State or States on Earth, they 'cannot be considered to be a mere alien.'[6] While there is a dearth of case law in outer space law generally, this interpretation of Article 12(4) is scaffolded by the UN Human Rights Committee's views in *Stewart v. Canada.* Here, the applicant was born in the United Kingdom but was a permanent resident of Canada. Immigration authorities sought to deport him to the United Kingdom as he had accrued a significant criminal record. However, the applicant argued that Canada was 'his own country' within the meaning of Article 12(4) of the ICCPR. While the applicant did not yet have Canadian citizenship, he successfully argued that he should be categorised as a *de facto* Canadian citizen. The UN Human Rights Committee confirmed at paragraph 5 of its view that 'the existence of a formal link to the State is irrelevant… [instead the ICCPR is] concerned with the strong personal and emotional links an individual may have with the territory where he lives and with the social circumstances obtaining in it.'

Constructing a Human Rights Framework for Celestial Bodies

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Space companies, States and international organisations have not yet proffered a mechanism to examine the breadth and scope of human rights for residents of extraterrestrial settlements. Since it is predicted that many extraterrestrial settlements will be established by space companies, an examination of the extent to which these companies must exercise human rights due diligence remains in its infancy. The analysis above suggests that as long as a resident of an extraterrestrial settlement can preserve close connections with a State on Earth, their right to enter that State is enforceable. The practicalities of an individual returning to that State remain to be seen, and the logistics will undoubtedly be complicated. However, customary international law may eventually evolve to recognise an all-encompassing right for residents of extraterrestrial settlements to enter Earth, no matter how fragile their connection is to a State. Clearly, a migration governance framework will need to be developed in the near future to consolidate the fundamental elements required to safeguard the punctilious, safe, and responsible mobility and migration of people in outer space through efficient and well-administered migration policies.

Proposed principles to foster the necessary conditions for well-managed migration in outer space include State and non-state actor compliance with migrant rights and proactive engagement and consultation with all space actors, including States that are not yet classified as spacefaring. In formulating this governance framework, an analysis of the meaning of 'close and enduring connections' will be imperative, as what legal ramifications will arise if the first generation of settlers, as well as their future descendants, are unable to sustain these links. There is potential that some States and space companies will argue that freedom of movement is not an absolute right and that due to the logistical, financial and technological implications of residing on an extraterrestrial settlement, individuals have actual and implied knowledge that this could impede their ties and connections to their families and former communities on Earth. If customary international law develops to include an all-embracing right for residents of extraterrestrial settlements to return to Earth, rather than just the State of which they or their ancestors were citizens or permanent residents, perhaps it would help to solve some of the challenges that have been explored in this article, especially since States have espoused different definitions of the phrase 'his own country.' Moreover, it would not be inane to suggest that customary law may develop to oblige the governing authorities of self-sustaining extraterrestrial settlements to

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make potential residents aware that if they opt to sign up to reside on Mars, there is a strong likelihood that their ability to return to Earth, whenever they wish to do so, will be significantly impeded.

Concluding Thoughts

The above analysis indicates that given the vast distances between Earth and Mars, endeavours to ensure that States and space companies exercise human rights due diligence will be subject to scepticism. However, the implications of restricting the exercise and enforcement of human rights on extraterrestrial settlements, especially the right to liberty of movement, cannot be underestimated. While we are at least another couple of decades away from landing the first human on Mars, dialogue needs to begin in earnest at the international level about what human rights 'will look like' in outer space. In the absence of a bespoke human rights framework, perhaps we can posit that the long-term viability of these settlements will be questionable. Thus, the existence of a comprehensive legal framework would enable individuals to critique the impact residing on Mars would have on their human rights, especially their right to liberty of movement, not only within the settlement itself but also potentially to other settlements on the celestial body.

It is foreseeable that States and space companies will need to substantiate to potential residents that they will retain a right to return to Earth not only for familial and economic reasons but also in the event of disasters, famine or armed conflict. A transparent risk assessment process, as well as a risk mitigation and remediation mechanism, will need to be instituted to examine the impact of the governing authority on human rights. How the international community endeavours to resolve these concerns before the first humans land on Mars remains to be seen. But it is indisputable that the mode of governance of extraterrestrial settlements, either by a State or space company alone or a hybrid State-space company authority, will have significant repercussions for the interpretation, monitoring and protection of freedom of movement, especially the right to return. Finding a solution sooner rather than later will be key to the future viability and durability of extraterrestrial settlements.

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COMMON RIGHTS REGIME IN OUTER SPACE LAW: MAKING SPACE FOR *JUS COGENS* NORMS

Dr. Atul Alexander[*]

Abstract

The objective of the common rights regime is to benefit humanity, although the phrase is not codified in any treaty pertaining to outer space law. It can be derived from the principles codified under these treaties. The common rights regime assumes significance in contemporary times because of the increased capabilities of States and private actors to exploit space resources. Parallelly, *jus cogens* norm provides a moral dimension to international law and can influence the space law regime. This paper evaluates the interaction between the common rights regime and *jus cogens* norms. Accordingly, the author has split this write-up into three portions; the first part discusses the advent of a common rights regime in outer space law, the second segment evaluates whether some elements of this regime have achieved the status of *jus cogens*, and the final portion segues into the findings and conclusion. For this research, the author has delimited the elements of the regime to peaceful use of outer space, non-appropriation and Common Heritage of Mankind (CHM).

Keywords: CHM – Common rights regime – General Assembly – *Jus Cogens* – Outer Space Treaty

Background

In the aftermath of World War II and the entry of Sputnik 1 into outer space on 4 October 1957, the applicable law in outer space has been hotly contested. With the Cold War between the Soviet Union and the United States at its zenith in the 1960s, it was felt that there was a requirement for comprehensive laws on outer space. The 1960s witnessed a series of milestones, like Yuri Gagarin's flight on 12 April 1961. Further, the decade saw with astonishment NASA's Mariner 2 and Venera 4 missions flying by Venus and travelling through its atmosphere, respectively.

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The United Nations took the lead by passing a series of United Nations General Assembly resolutions establishing the foundational framework of the space law. This was the first phase in the development of outer space law that witnessed the passing of non-binding United Nations General Assembly resolutions. Post-1967 saw the enactment of binding treaties to regulate the activities in outer space. These treaties were concluded under the auspice of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). As Prof. Sandeepa Bhat succinctly puts it, "Unfortunately, the treaty-making phase ended in 1979 with a lack of consensus among the States."[1] Thus, the developments conceptualised by UNCOPUOS did not see the light of day, and no tangible progress took shape post-1979. The 21st century saw the United Nations General Assembly play a pivotal role in terms of passing resolutions on myriad aspects of outer space activities.

The common rights regime derives from the series of principles that developed through the progressive development of international law. These principles took shape in the realm of space law because the regime's objective rested on the common interest of all mankind. These principles inter-alia include peaceful use of outer space, international cooperation, environmental protection, the prohibition of individual claims in outer space, Common Heritage of Mankind, etc. The rejection of State sovereignty and the limited role of domestic laws in the regime of outer space law meant international law played a significant role in filling the void. Indeed, there is scope for international cooperation without a formal and enforceable legal framework, but its scope and ambit vary in the absence of a formal law. One such example is seen in the International Telecommunication Union (ITU), wherein many of its initial agreements were premised on informal exchanges; however, for deepening international cooperation, a more binding legal framework is a prerequisite. The United Nations General Assembly suggested bringing space activities within the Charter of the United Nations; for instance, the UNGA Res 1721 (XVI) directed the States to be guided by international law and the United Nations Charter. Hence, the application of general international law to space law is indisputable, and the contents of general international law, which have garnered acceptance by States like customary international and *jus cogens*, exert their influence on the interpretation of outer space law.

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Common Rights Regime in Outer Space Law

The conception of a common rights regime can be traced back to the influential contribution of Grotius in terms of promulgating the doctrine of *res communis* to argue for freedom of seas. An equally important contribution stemmed from the African humanist tradition, which emphasised the role of communal values. For instance, the ancient African Philosophy Ubuntu underscored the interconnectedness between people and their communities. The principles under these space treaties took forward the idea of a common rights regime. This is reflected in Article I of the Outer Space Treaty, which articulates space exploration for the benefit of mankind. Further, Article II of the Outer Space Treaty puts forward the non-appropriation principle in claiming that no State has sovereignty over outer space or any other celestial body. Also, the Outer Space Treaty prohibits placing weapons of mass destruction in orbit or in outer space, and the use of celestial bodies shall be only for peaceful purposes. The principle of CHM reflected in the Moon Agreement 1979 underscores that the Moon and other celestial bodies are not subject to national appropriation. The Moon Agreement envisages the creation of an international regime, including formulating procedures for governing the exploitation of natural resources on the Moon. The space law encourages international cooperation for collaborating in scientific research and space exploration for equitable benefits-sharing among the developing States. Therefore, principles like non-appropriation, peaceful use of outer space, benefit sharing, and international cooperation can be termed as part of a common rights regime. Space law, which was embryonic, has become a happening regime because of technological advancement. It came to be accepted that outer space was to be considered as *res communis omnium*.

Article II of the Outer Space Treaty codifies the non-appropriation principle as: "Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." The plain reading of Article II would indicate that outer space is not 'territorial'; therefore, the claim of sovereignty over any part of outer space was prohibited. The principle was also accepted by the United States and USSR, notwithstanding the Apollo 11 planting of the United States flag on the Moon. Therefore, when Article II was negotiated, it remained less controversial. As Steven Freeland aptly puts it, "The non-appropriation principle is set out

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immediately following Article I, which elaborates on the 'common interest' and 'freedom' principles and confirms that the exploration and use of outer space are to be undertaken 'for the benefit and in the interests of all countries' and freely by all states without discrimination of any kind, on a basis of equality and in accordance with international law." This remains the practice of space-faring States, with the only exception being the Bogota Declaration1976, where several equatorial States claimed sovereign rights over the geostationary orbit above their territories. The Declaration mirrored the concern of these developing States pertaining to space exploration being monopolised by the technologically superior States. As Agama points out, "To circumvent the Outer Space Treaty's declaration that outer space is not subject to national appropriation, the Bogotá Declaration smartly categorised the geostationary orbit as a natural resource but failed to recognise it as a region of outer space."

Apart from the non-appropriation principle, the peaceful use of outer space ensures restriction on the military uses of outer space. Hence, the activities in outer space must be carried out in line with international law and the United Nations Charter. In this regard, UNGA resolution 1721 made it apparent that "international law and the United Nations Charter should apply to 'outer space and celestial bodies'. This idea reverberated in the subsequent United Nations General Assembly resolutions. Therefore, the principle of non-use of force under the United Nations Charter applies equally to space law. Also, Article IV of the Outer Space Treaty further states that "[t]he moon and other celestial bodies shall be used by all States Parties to the [Outer Space] Treaty exclusively for peaceful purposes."

The enormous possibility for exploitation through peaceful means for the benefit of humanity has triggered the debate on the concept of benefit sharing in Outer Space. Two multilateral treaties, the Moon Agreement and the Outer Space Treaty, explicitly and implicitly allow States to share benefits arising from space activities. Article I(1) of the Outer Space Treaty recognises that "exploration and use of outer space must be carried out for the benefit and in the interests of all States." The negotiating history of this provision suggests the sharing of scientific and research data. According to Deplano, "…the obligation of benefit sharing indicates that outer space is an inclusive environment—that is to say, an area that everyone can use on equal terms." According to her, in providing such an interpretation, it rejects the notion of outer space as *terra nullius*. The provision

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under the Outer Space Treaty is unique because, unlike the Antarctic Treaty 1959 and Wellington Convention 1988, the Outer Space Treaty addresses benefit sharing in the backdrop of national appropriation.

The Moon Agreement contains specific provisions on benefit sharing. However, the Moon Agreement in Article 11(5) undertakes to establish an international regime, including relevant procedures governing the exploitation of natural resources of celestial bodies, whenever such exploitation becomes feasible. Para 7(d) of the said provision enables "An equitable sharing by all States Parties [to the Moon Agreement] in the benefits derived from those resources, whereby the interests and needs of the developing countries..." The provision can be of practical use in the future as the Moon is rich in resources like Helium 3, a rare isotope of Helium, which has the potential to be used as a fuel for nuclear fusion, rare earth elements, water ice in the poles, etc. However, the Moon Agreement provision has dual limitations: firstly, it is limited to the Parties of the Moon Agreement, and secondly, special consideration is to be provided to the interest of the developing States.

Common Rights Regime and *Jus Cogens*

General international law has a profound role in Space law's progressive development and codification. One such component of general international law is *Jus Cogens*, which can positively influence the principles of Space law.[2] In the hierarchy of norms, *jus cogens norms* take the primary slot. *Jus Cogens*, codified under Article 53 of the Vienna Convention of the Law of Treaties (VCLT), means- "A treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law. For the purposes of the present Convention, a peremptory norm of general international law is a norm accepted and recognised by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character."

The key difference between customary international law and *jus cogens* is that the former allows for exceptions in persistent objector, which does not apply to the latter. The Draft Conclusions on Identification and Legal Consequences of Peremptory Norm of General International Law (draft conclusions) has identified a non-exhaustive list of norms, and the International Law Commission (ILC) did

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not foreclose the emergence of new *jus cogens* norms. As the ILC Special Rapporteur Dire Tladi puts it, "The list contained in the annexe is non-exhaustive, which reinforces the fact that this list is without prejudice to other norms having the same character." Further, breach of *jus cogens* means States incur additional responsibility under Article 41 of the Articles on Responsibility of States for Internationally Wrongful Acts.

According to Sue Guan, Article 53 combines naturalism and positivism, the latter because the consent element is seminal in identifying *jus cogens*. Also, *jus cogens* communicate the fundamental value of the international community, which, for instance, is highlighted in the *Arancibia Clavel* case by the Supreme Court of Argentina. The consent of the States comes into play for the application and recognition of natural law. Therefore, the consent element is required to provide legitimacy to *jus cogens*, although its underlying framework is rooted in natural law traditions. The draft conclusions provide the method to identify *jus cogens*, legal consequences, and a non-exhaustive list of *jus cogens* norms. Draft conclusion 4 lays down the criteria for the identification of *jus cogens*, that is, it is a norm of general international law, accepted and recognised by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.

Norms of general international law can be proven through the acceptance and recognition by a very large and representative majority of States. In the case of *Belgium v. Senegal* (2012), the International Court of Justice (ICJ) determined the prohibition of torture as *jus cogens* based on the instrument of universal application affirmed by the States. Evidence of acceptance can be adduced from various instruments (non-exhaustive) capable of indicating the view of States. In short, a norm of general international law accepted and recognised by States not capable of being derogated (unless it's a subsequent norm of the same character) constitutes *jus cogens.*

Space treaties contain provisions that have the prospect of attaining *jus cogens* norms like the freedom to explore outer space, the principle of non-appropriation and peaceful use of outer space, CHM, etc. Evidence of State practice in terms of acceptance and recognition can be inferred from resolutions, decisions, or acts of

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international organisations. One such resolution is the UNGA Resolution 1962 (XVIII), which took cognisance of resolutions 1721 (XVI) and 1802 (XVII), and highlighted the significance of core principles of outer space law. Its adoption without any opposition adds added weight to its credibility.

Further, as pointed out by Laura Jamschon Mac Garry and Steven Freeland, Member States response to the questionnaire by the Chair of the COPUOS working group on the application of the five United Nations treaties between 2015 and 2021 reflects widespread State practice pertaining to the principles of Space law. For instance, German delegates regard the provisions of the Outer Space Treaty as having the status of customary international law because almost every State carrying out space activities has acceded to the Outer Space Treaty. Moreover, they consider the bases for the identification of *jus cogens* to be customary international law, treaties, and general principles of law. The statement is significant because scholars have observed that *jus cogens* is customary international law plus. As M.K Yaseen, the former Chairman of the Drafting Committee of the VCLT, notes- "There is no question of requiring a rule to be accepted and recognised as peremptory by all States. It would be enough if a very large majority did so". This implies that even a minor aberration would not be a roadblock in the formation of *jus cogens* norm.

The travaux préparatoires of the Outer Space Treaty also reveal State practice espousing acceptance and recognition of the principles of space law. For example, the Soviet Union articulated that the provisions of the Outer Space Treaty intended to protect not only the interest of individual States but the international community as a whole. Similarly, Italy identified three fundamental principles in outer space law: res communis, non-appropriation, and exploration of outer space, according to the tenets of international law. According to the United States, these principles constituted international law as they were accepted by the United Nations members. Also, when the United States planted its flag on the Moon, it considered this a symbolic gesture and not a claim of sovereignty. India, a major space-faring State, defined the principles under the Outer Space Treaty as the Magna Carta of outer space.

Further, States, through their legislative act, have shown a propensity to protect and preserve outer space and the Moon for the benefit of present and future

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generations. The Apollo Lunar Legacy Landing Act 2013 was intended to preserve the Apollo Lunar Landing Site; NASA's Artemis Accords 2020 underscores the seminal principles of the Outer Space Treaty. Section 10 of the Accords mentions, "…the extraction of space resources does not inherently constitute national appropriation under Article II of the Outer Space Treaty…" Although there were private claims of ownership over the Moon and asteroids, like the claim of Dennis Hope, who established the Lunar Embassy in 1980, Lawyer Jenaro Vera registering the Moon as his own property under the laws of Chile, etc., none of these claims were recognised by the international community and constitute exceptions.

Scholars like Judge Manfred Lachs[3] and Oralova support the emergence of the *jus cogens* doctrine in the outer space regime. As an early scholar in 1956, C.W Jenks considered that prohibition of national appropriation is premised on international public policy. Ram Jakhu, Steven Freeland and Kuan-Wei Chen believe that freedom of exploration and non-appropriation falls in the bracket of *jus cogens*. Ram Jakhu regards *jus cogens* represents global public interest. This is further backed by the UNGA resolution 1721, which indicates that these principles were adopted without a vote and reflect the will of the international community. Despite the principle of non-appropriation facing backlash in the context of the Bogota Declaration 1976, where eight equatorial States claimed sovereign rights on the portions over the geostationary orbit, such claims would not preclude the acceptance and recognition of the principle of non-appropriation by the international community as a whole.

The significance of these principles has been underscored in the United Nations General Assembly Resolutions. For instance, the UNGA Resolution 1472 talks about the relevance of peaceful purposes and international cooperation to mitigate rivalries among States in outer space. UNGA Resolution 1721 calls for peaceful cooperation in information sharing with other States. The non-appropriation principle is affirmed in the same resolution, which articulates that outer space and celestial bodies are free for exploration and use by all States in accordance with international law and not subject to national appropriation. These principles hold a crucial place today as they ensure the future generation inherits a space environment that is sustainable and free from escalating tension. Therefore, the non-appropriation principle has received universal acceptance, embodying the aspirations of the majority of States. Hence, its *jus cogens* status can be affirmed.

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The CHM principle is premised on the fact that resources belong to all of humanity and, therefore, be used for the benefit of all. The benefits derived from their use are to be equitably shared, which is to be done through an international arrangement. However, the nature of the international arrangement lacks specificity. The Moon Agreement codifies the principle of CHM, which lacks sufficient state practice amongst the space powers; hence, its status as a jus cogens is debatable. Meanwhile, the peaceful use of outer space, as contemplated under Article IV of the Outer Space Treaty, prohibits the use of nuclear weapons or any other kinds of weapons of mass destruction (WMD), but the use of conventional weapons was left out. Also, the peaceful use of Outer Space is not defined anywhere and there is a possibility to authorise force through UNSC authorisation, self-defence or humanitarian intervention. State practices of Australia and France, in addition to United Nations General Assembly resolutions, reveal that the peaceful use of outer space is limited to nuclear weapons and WMD.

As the number of spacefaring States has surged lately, the prospect of the principles in outer space law attaining *jus cogens* status is immense. The current practice demonstrates that the non-appropriation principle has attained the *jus cogens* status; other principles limited in this study to CHM and the peaceful use of outer space lack sufficient State practice and specificity. This does not rule out the possibility of these principles achieving *jus cogens* status in the future, considering the recent advancement in Space law and the dynamic nature of *jus cogens*.

Conclusion

Both common rights regimes and *jus cogens* aim to safeguard the interest of the international community of States as a whole. As highlighted, the key principles enshrined under space law treaties have attained customary international law. Unlike customary international law, *jus cogens* requires a higher degree of State acceptance and practice. The State practice could be identified through non-exhaustive sources as provided under the Draft Conclusions on Identification and Legal Consequences of Peremptory Norm of General International Law. Also, the relatively few States objecting to the emergence of *jus cogens* would not stall or hamper the acceptance and recognition of principles by the international community. The concerns of the minority States could be addressed through diplomatic means, thus reconciling State sovereignty with fundamental goals in

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mind. Of course, not every principle reflected in the common rights regime of space law has reached *jus cogens* status, except for the non-appropriation principle. The principle of CHM under the Moon Agreement lacks sufficient State practice, and the peaceful use of outer space is limited to the use of nuclear weapons and weapons of mass destruction. Today, with the rapid advancement of technology and humanity's presence continuing to expand in Space, regulating space activities is a prerequisite. *Jus Cogens* ensures a legal framework to regulate the actions of States and private entities in sync with the larger interests of States.

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ACCESSIBLE AIRPORTS: THE INDIAN CONUNDRUM

Kanchan Yadav[*]

Abstract

Among the rights guaranteed under the Universal Declaration of Human Rights (UDHR) and the Constitution of India, the right to freedom of movement is a primary tenet of fundamental freedoms. However, for 1 out of 8 people who might suffer from an apparent or latent disability, this right is significantly curtailed due to the lack of adequate facilities in airports and the civil aviation sector in general. International civil aviation bodies such as the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) have already published detailed guidelines on the matter regarding how to make airports and air travel truly accessible, keeping in mind the broad range of physical and intellectual disabilities that the passengers may have. However, the true problem lies in their implementation. As was evidenced in this study, even for the major airports in India, implementation of truly disability-friendly policies is abysmally lacking. While steps are being made in the right direction, strict and urgent actions are required at both state and central governmental levels to ensure implementation across the nation.

Keywords: Accessibility standards – Freedom of movement – ICAO – IATA – UDHR

Background

As per the estimates of the World Health Organization (WHO), globally, around 1.3 billion people or 16% of the world population have some visible or latent form of disability. Moreover, with the increase in the percentage of the ageing population in many countries, this number is likely to grow further in the near future. One of the primary modes of transportation in the twenty-first century,

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particularly for long-distance and international travel, is air travel. Yet, there is a lack of availability for disability-friendly and accessible infrastructure and equipment in this sector. Additionally, there is also no cohesive standard delineating the authorities responsible for the same.

Under this backdrop, this paper conducts an analysis of the international standards and directives related to airport and air travel accessibility of people with disabilities, with a special reference to the current Indian scenario. After the introductory section, it delves into various international conventions, directives, and other instruments regarding accessible and inclusive airports, which are published by bodies such as the United Nations, the ICAO, and the IATA. In the next section, the Indian domestic policies and guidelines regarding airport and air travel accessibility are explored in detail. Then, it turns to the practical scenario, particularly that of some of the major Indian airports. Finally, the paper provides recommendations and ways forward regarding how to mitigate such gaps to bring the airports up to the internationally recommended standards.

Internationally Accepted Standards

Beyond the exclusive rights related to air travel and airport accessibility, the general rights and freedoms of people with disabilities are outlined in the 2006 Convention on the Rights of Persons with Disabilities (CRPD). The general principles outlined in the Convention emphasise that the treatment of persons with disabilities in a society must be dependent upon the ideas of non-discrimination, 'full and effective' participation and inclusion in society, respect for difference and acceptance, equality of opportunity, and accessibility. Article 9 of the Convention speaks about accessibility in particular and mentions that persons with disabilities must be provided with equal access to the physical environment, transportation, communication, and other facilities and services.

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Considering the requirement of ensuring full and effective participation of persons with disabilities in society and the focus on access to transportation in particular, there is no doubt that accessible air transport would certainly be under the purview of the Convention. However, the two primary international bodies in passenger air travel, the ICAO and IATA, have published their own directives regarding accessible air travel as well.

The most comprehensive document in this regard is the ICAO's 2013 Manual on Access to Air Transport by Persons with Disabilities. The Manual incorporates a broad definition of who will be considered as a 'person with disabilities' and includes physical and intellectual disability as well as age and illness-related difficulties. It also emphasises that "Persons with disabilities have the same international rights as other citizens, such as accessibility, and full and effective participation and inclusion in society, including freedom of movement and freedom of choice... Persons with disabilities should have equivalent access to air travel."

Keeping in line with the rights and freedoms mentioned in the UDHR and the 2006 Convention, the Manual takes into account the special needs and dignity of persons with disabilities and mentions that such should be ensured during all stages of air travel, starting from reservation of tickets to arrival. Moreover, special services must be provided without charge and in a seamless manner to ensure that no one is left 'stranded or without assistance' and that a safe and comfortable journey can be ensured for all. It mentions that such accessibility should not be limited only to the bare minimum of air travel but should extend to all facilities within the airport, such as washrooms, shops, restaurants, lounges, and pathways. To facilitate this, the airport and airline staff should be trained adequately and regularly.

More recently, in 2022, there was a proposal by Brazil before the ICAO to review the 2013 Manual, especially taking into account the additional issues that may have

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risen in the aftermath of the pandemic. This proposal highlighted the need to consult people with disabilities and service providers to ensure that appropriate accessibility features can be implemented. It identified the need to 'deliver a predictable, pleasant and dignified travel experience throughout the passenger journey' for all passengers, including passengers with disabilities so that air travel services can be provided to all in an equitable manner.

On a similar vein, the IATA, in its 75th Annual General Meeting of 2019, had passed a Resolution on Passengers with Disabilities, which included several core policy and process principles. Similar to ICAO, the focus of these principles is primarily on the consistent assurance of dignity. The policy principles include the resolution to achieve universal accessibility, clarity and unambiguity in national legislation and harmonisation of policies and practices. The process principles include assistance and guidance to passengers with disabilities, specialised training to service staff, and reducing existing barriers.

Based on the Resolution document, the IATA has also published a detailed fact sheet on Air Travel Accessibility for Passengers with Disabilities. This document correctly identifies that given the inherently multinational nature of air travel, to achieve true universal accessibility, global standards and multilateral collaboration among different levels of government and other bodies need to be achieved. Moreover, it has also highlighted that till now, disability assistance is largely limited to wheelchair support, which has caused a significant increase in the demand for wheelchairs in airports to unsustainable levels. Conversely, the document suggests that if the nature and special needs of different kinds of disabilities, most importantly, invisible disabilities, are recognised through adequate training of the personnel involved, appropriate accommodations may be provided.

The India Story

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In terms of the initiatives taken by the Government of India in this front, the Ministry of Civil Aviation has published the Accessibility Standards and Guidelines for Civil Aviation in 2022. It starts off by stating that the accessibility standards in question do not only apply to people with disabilities but also towards any passengers with special needs, such as the elderly, children, and expecting mothers. Being rooted in the Rights of Persons with Disabilities Act 2016, it provides a clear division of responsibility regarding accessibility features among airport operators, airlines, and security agencies.

The facilities within the premises of the airport are usually maintained by airport authorities. Thus, the liability of making such facilities and features disability-friendly has been put upon them. This includes areas such as parking, drop-off and pick-up points, entrances, reception, security check areas, corridors, baggage claim, seating spaces, lifts, ramps, handrails, toilets and drinking water points, etc. Guidelines have been provided regarding making these areas accessible and inclusive towards various forms of disability, such as visual, auditory, locomotor, and intellectual disabilities.

Providing inclusive facilities that are related to ticket booking and assistance during air travel has been made the responsibility of airlines. This includes the availability of assistance information on the airline website, providing mobility equipment on board the aircraft, making arrangements for service animals, removing infrastructural and communicative barriers as much as possible, providing boarding ramps, ensuring that the safety instruction card on board the aircraft is available in braille, special safety briefings, and appropriate training of the airline personnel.

Finally, the guidelines also provide for specific instructions towards the security agencies involved in the screening and security clearance procedure. To begin with, the individual needs of the passengers with disabilities must be maintained with 'dignity, respect and courtesy'. This includes provisions for private screening and a

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search procedure that takes into account the nature of their disability. The standards set are that of 'ask, and not assume' regarding the nature of the disability and the kind of assistance needed, being mindful of invisible disabilities, and focusing on the person and not on the disability. The document also provides specialised instructions for searching for mobility devices, prosthetics, devices that cannot be removed, and service animals, as well as regarding passengers with different disabilities such as auditory, visual, or speech disabilities, or intellectual disabilities such as Alzheimer's, Dementia, Autism, etc.

Overall, while not perfect, these Accessibility Standards and Guidelines are surely a good start, as they provide specific measures to be undertaken to ensure inclusivity and the different bodies that would be responsible for the same. To understand the ground reality in this matter, an analysis is conducted regarding three international airports of varying sizes and passenger capacity – Indira Gandhi International Airport (Delhi), Chhatrapati Shivaji Maharaj International Airport (Mumbai), and Netaji Subhash Chandra Bose International Airport (Kolkata).

Starting the discussion with the Delhi Airport, the situation seems to be hopeful on the face of it. The Airport website provides detailed information regarding various support services that it has for 'passengers with reduced mobility', and one can even request or inquire about specific support services through dedicated phones within the premises. All three terminals have specific lanes and pick-up/drop-off points that are disability friendly. Wheelchair and buggy services are available, as well as reserved seating areas and exclusive check-in counters. The lifts are braille-coded to ensure smooth guidance for visually impaired passengers.

However, all such measures seem to cater exclusively towards physical disabilities, specifically locomotor and visual disabilities, while the Guideline document provides specific recommendations towards invisible disabilities as well. A step in that direction is the recently launched Sunflower Program of the Delhi Airport, where someone with a hidden disability might request a card, pin, or wristband

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with the Sunflower logo. Wearing this is aimed at discreetly informing the airport personnel of the disability of the passenger and making them aware that the wearer might need 'extra help, understanding, or more time'. Still, beyond such buzzwords, it is unclear how the sunflower program is supposed to provide additional help to the wearer. The sunflower does not signify what kind of special assistance the wearer might need, and there is no provision to mention such needs while filling out the form to request a sunflower. Thus, the staff would not be able to provide any real help to a wearer, unless they specifically request such help. If persons with auditory, speech, intellectual, or other such disability are unable to articulate or communicate their requirements, they will not receive help by simply wearing the sunflower.

Moreover, even with respect to facilities that are supposedly implemented, there are gaps that are yet to be bridged. Several passengers and their family members have resorted to social media to air their accessibility-related grievances, especially after the airport authorities brushed things off with a simple apology. In January this year, a 79 year old wheelchair bound passenger was asked to stand for the security check, in the face of her obvious disability. Upon being reminded of the same, the security officer supposedly chose to mock the elderly lady. Similarly, earlier in November, a passenger suffering from psychosocial disability had registered for the Sunflower program and requested human assistance without a wheelchair. Even after jumping through a lot of hoops, she was told that she could only get wheelchair assistance and not human assistance without the wheelchair. Upon complaining, she was told to take whatever assistance was available. These instances are clear indicators of the fact that the Airport staff members are not well-versed in what the special assistance and sunflower program entails.

If the situation at the Delhi Airport did not seem that great to begin with, it only gets worse from here. Coming to the Mumbai Airport, it seems that the administrators have pushed most of the responsibility of an accessible airport on

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the airlines. The wheelchair requests at the Mumbai Airport must be done to the airline while booking the tickets. For airline-provided wheelchairs, the airport authorities only help out by providing the staff for wheelchair assistance. While airport-provided wheelchairs are also available, they are charged quite heftily at Rs. 1180/- per trip. The abysmal lack of wheelchair access in the Mumbai Airport was highlighted earlier this year, when an 80 year old man passed away after walking 1 km to the immigration counter due to wheelchair unavailability. Even though the responsibility for this incident is put on the airline, it is strange that in such a dire situation, the airport authorities were unable to provide wheelchair access from their side. The website mentions that ramps are available in the Airport; however, it does not mention the extent of such availability and access to different areas and facilities of the Airport. There is no mention of any other facilities for any kind of visual, auditory, speech, or intellectual disabilities.

Moving to the Kolkata Airport, its website mentions that the premises have ramps, braille signs inside the lifts, and disability-friendly toilets. It is mentioned that wheelchairs can be requested only through the concerned airlines. The abysmal lack of facilities and sensitisation of the staff was highlighted recently when a wheelchair-bound passenger was asked multiple times to get up and walk during the security screening, and she brought the issue to the attention of the Supreme Court. The Court identified that adequate guidelines, while present, remain unacknowledged and unimplemented in the airports by the staff in question and emphasised the need for appropriate training to ensure that the dignity and respect of disabled passengers are not violated.

From the discussion of three big airports in India, it seems that the situation for inclusivity and access to air travel is truly dire. The airport administrators are too quick to slide the majority of accessibility-related responsibilities on the airlines. Even in the areas where there are already programs, like the sunflower program at

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Delhi Airport, the purpose of it is greatly undermined by insensitive and ignorant staff members.

Ways Forward

Considering that almost 1 in 8 persons would have some kind of apparent or invisible disability, ensuring safe, equitable, and dignified air travel for them would be the need of the hour towards the successful implementation of the UDHR and CRPD. While the ICAO and IATA have been proactive in publishing guiding documents on that front, none of those are mandatorily implementable by the national governments. As already identified, due to the very nature of air travel, any effort towards universal accessibility will fall through without multilateral collaboration among different nations.

India has certainly taken a step in the right direction when the Ministry of Civil Aviation published the Accessibility Standards and Guidelines. Due to the comprehensive and detailed nature of this document, it can serve as a valuable tool towards upgrading the existing infrastructure and reforming practices in Indian airports. Further, in the recent Arushi Singh case, the Supreme Court has issued requisite guidelines to be followed, such as mandatory wheelchairs at every gate to facilitate self-reliance, coding of the boarding passes to indicate the nature and severity of the disability and better disability literacy and training among the airport staff. However, as the government itself has also recognised in the case, there is a lack of push towards implementing the same. Moreover, the Apex Court did not clarify whether the central government, state government, or airport authorities should ensure compliance. This allows various levels of stakeholders, including the airport authorities, to effectively skirt their responsibilities and only provide lip service towards inclusivity efforts.

If any real progress is to be made in this field, it is crucial that the central and state governments mandate the implementation of these standards. This can be done in

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a two-fold manner. For airports that are currently being constructed or are going through any significant restructuring and development, such as the Noida Airport or the Guwahati Airport, these standards should be implemented from the get-go. This would ensure that as soon as these airports or their expanded terminals become operational, they would cater to the needs of disabled passengers. For existing airports that are already operational, a year-wise action plan might be put in, where every airport must fulfil a certain standard of inclusivity at the end of each year, reaching complete adherence to the guidelines at the end of three to five years. Only with such stringent measures can this ever-expanding gap be rectified.

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